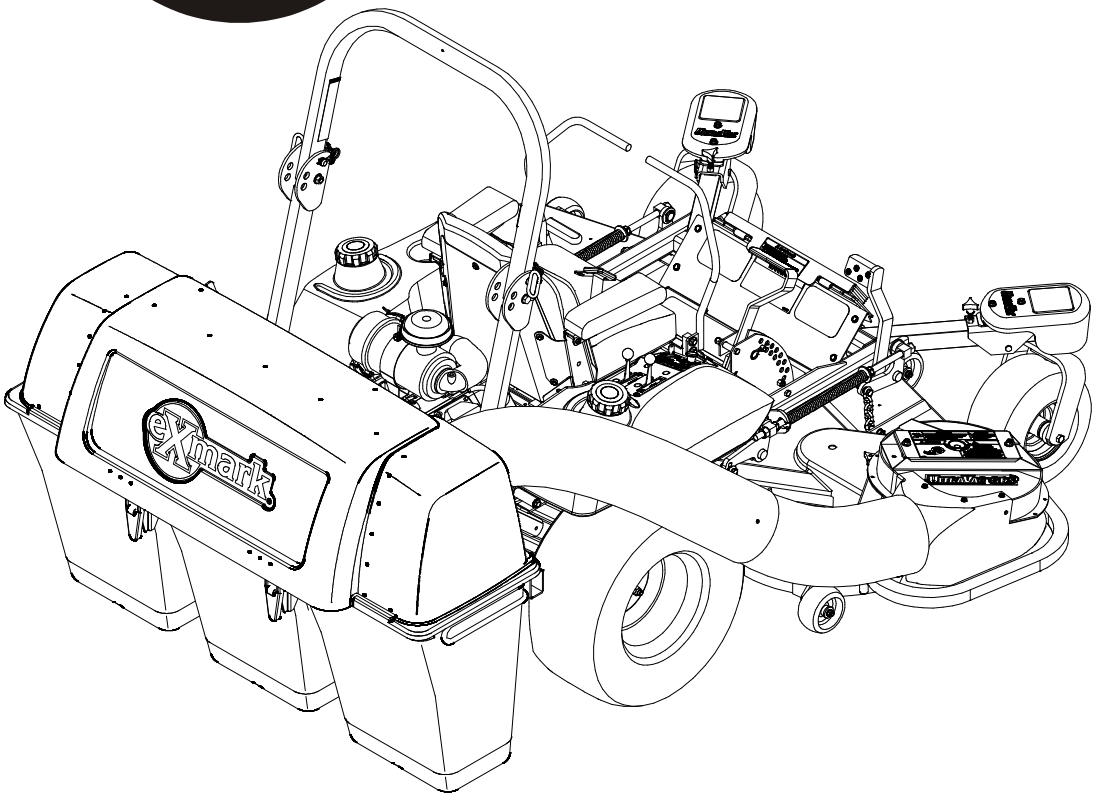
For Serial Nos. 440,000 & Higher

eXmark® MFG. CO. INC.



ULTRA VAC™

LAZER Z® AND LAZER Z® XP MODELS

OPERATOR'S MANUAL

CONGRATULATIONS on the purchase of your new Exmark equipment. This product has been carefully designed and manufactured to give you a maximum amount of dependability and years of trouble-free operation. If additional information is needed, or should you require trained mechanic service, contact your authorized Exmark equipment dealer or distributor. If you need to order replacement parts from your dealer, always give the model number and serial number of your equipment as well as the part number, description and quantity of the part needed.

The Serial No. plate is located on the front mount of the hopper assembly. For ease of ordering and reference, we suggest that you record the information requested in the following identification table.

Place Model No. and Serial No. Label Here
(Included in Literature Pack)
or Fill in Below

Model No. _____

Serial No. _____

Date Purchased _____

Part No. 103-4737

⚠ WARNING

POTENTIAL HAZARD

- This product is a piece of power equipment.

WHAT CAN HAPPEN

- Failure to follow safe operating practices can result in serious operator injury or even death.

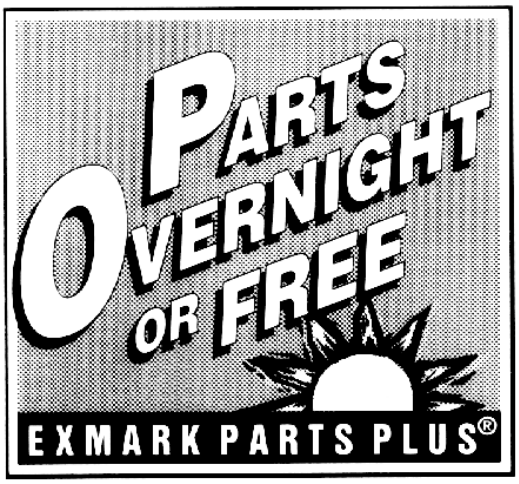
HOW TO AVOID THE HAZARD

- Keep all shields, guards and safety devices (especially the grass discharge system) in place and in proper working condition.
- Stop engine and wait for all moving parts to stop. Remove spark plug wire(s) or remove key before adjusting, servicing, or performing maintenance.
- If mower deck or blower becomes clogged, stop engine and wait for all moving parts to stop. Remove spark plug wire(s) or remove key before cleaning blockage.
- Keep hands, feet and clothing away from power driven parts.
- Keep off mower unless seat platform is provided.
- Keep others off mower.

Exmark reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products manufactured previously. Exmark, or its distributors and dealers, accept no responsibility for variations which may be evident in the actual specifications of its products and the statements and descriptions contained in this publication.

EXMARK PARTS PLUS^{Ò} PROGRAM

EFFECTIVE DATE: September 1, 1995



Program

If your Exmark dealer does not have the Exmark part in stock, Exmark will get the parts to the dealer the next business day or the part will be FREE* Guaranteed!!

How the Program Works

1. If dealer does not have part in stock for a "down" unit at the time of request by customer, the dealer contacts his distributor by 1:00 p.m., local time, and requests Exmark Parts Plus^{Ò} shipment of six (6) line items or less.

2. Distributor ships part(s) to dealer or customer, as requested by dealer, same day, overnight UPS Distributor bills dealer for part and freight charges where applicable.

3. If distributor does not have the part(s) in stock to satisfy Exmark Parts Plus^{Ò} order, he contacts Exmark by 3:00 p.m., central time, with an Exmark Parts Plus^{Ò} order of six (6) line items or less.

4. If order is received by 3:00 p.m. central time, Exmark ships part(s) direct to dealer or customer, as requested by distributor, same day, overnight UPS Exmark bills the distributor for parts and shipping charges, where applicable.

5. The customer pays for the part and freight if it is shipped under the Exmark Parts Plus^{Ò} and if it arrives in accordance to the program.

6. Who pays for the part and freight if it fails to arrive overnight in accordance to the program?

   A. Under any circumstance the customer does not pay.

   B. If the part does not arrive overnight due to:

      1. The dealer not submitting the Exmark Parts Plus^{Ò} order to his Exmark distributor by 1:00 p.m., the dealer pays for the part and freight.

      2. The Distributor being unable to ship the part the same day or not submitting the Exmark Parts Plus^{Ò} order to Exmark by 3:00 p.m., central time, the Distributor pays for the part and freight.

      3. Exmark being unable to ship the part and the Exmark parts order is received by 3:00 p.m., central time, Exmark pays for the part and freight.

      4. If the part does not arrive overnight due to the shipper (UPS), the shipper pays for the freight and Exmark pays for the part.

The following restrictions apply -- The Exmark Parts Plus^{Ò} Program is available only through participating Exmark Dealers and applies only to orders submitted on this program Monday through Thursday. Parts Plus service is available only in the 48 contiguous United States. UPS has initiated a Saturday delivery program to many areas of the continental United States and can be requested for an overnight shipment on Friday to be delivered Saturday. The next day air charge, plus the Saturday delivery fee will be the responsibility of the purchaser. Exmark Mfg. will assume no responsibility for Saturday delivery shipments. To qualify, all Exmark Parts Plus^{Ò} orders must be received by Exmark by 3:00 p.m., central time. Orders must be six (6) line items or less. Exclusions from the Exmark Parts Plus^{Ò} Program are: Any wholegood or accessory in its entirety, engines and engine replacement parts, 5-speed Peerless transmissions and 5-speed transaxles, hydraulic or hydrostatic wheel motors, cutter decks and engine decks or any item exceeding United Parcel Service size and weight restrictions.

Due to UPS restrictions, aerosol spray paint is considered a hazardous material and cannot be shipped via UPS next day or Second Day Air.

Exmark Manufacturing stocks a limited supply of parts for transaxles, pumps and wheel motors. These parts can be ordered for Next Day Air shipment but will not be guaranteed per the Parts Plus Program.

OPERATOR'S MANUAL

This manual contains assembly, operating, maintenance, adjustment and safety instructions for your Exmark Ultra Vac.

BEFORE OPERATING YOUR ULTRA VAC, CAREFULLY READ AND UNDERSTAND THIS MANUAL AND THE OPERATOR'S MANUAL FOR YOUR MOWER IN THEIR ENTIRETY.

By following the operating, maintenance and safety instructions, you will prolong the life of your Ultra Vac, maintain its maximum efficiency and promote safe operation.

If additional information is needed, or should you require trained mechanic service, contact your authorized Exmark equipment dealer or distributor.

All Exmark equipment dealers and distributors are kept informed of the latest methods of servicing and are equipped to provide prompt and efficient service in the field or at their service stations. They carry ample stock of service parts or can secure them promptly for you from the factory.

All Exmark parts are thoroughly tested and inspected before leaving the factory, however, attention is required on your part if you are to obtain the fullest measure of satisfaction and performance.

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1. SAFETY

1.1 SAFETY ALERT SYMBOL

This SAFETY ALERT SYMBOL is used both in this manual and on the machine to identify important safety messages which must be followed to avoid accidents. This symbol means:

ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The safety alert symbol appears above information which alerts you to unsafe actions or situations and will be followed by the word **DANGER**, **WARNING**, or **CAUTION.**

DANGER: White lettering / Red background. Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING: Black lettering / Orange background. Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION: Black lettering / Yellow background. Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

1.2 TRAINING

1.2.1 Regard the Exmark Ultra Vac as a piece of power equipment and teach this regard to all who operate this unit.

1.2.2 Before operating your Ultra Vac, carefully read and understand this manual and the operator's manual for your mower in their entirety. Familiarize yourself with the controls and the proper use of the equipment. If the operator(s) or mechanic(s) can not read English, it is the owner's responsibility to explain this material to them.

1.2.3 Do not allow operation of this machine by untrained personnel. Never allow children, teenagers, or people unfamiliar with these instructions to use the mower. Local regulations may restrict the age of the operator.

1.2.4 Avoid mowing while people, especially children, or pets, are nearby. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

1.3 PREPARATION

1.3.1 Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by Exmark.

1.3.2 The use of personal protective equipment, such as (but not limited to) protection for the eyes, ears, feet, and head is recommended.

⚠ CAUTION
POTENTIAL HAZARD ♦ This machine produces sound levels in excess of 85 dBA at the operator's ear when in operation.
WHAT CAN HAPPEN ♦ Exposure to sound levels of 85 dBA or above for extended periods of time can cause hearing loss.
HOW TO AVOID THE HAZARD ♦ Wear hearing protection when operating this machine.

1.3.3 While mowing, always wear substantial footwear and long trousers. Do not operate equipment when barefoot or when wearing open sandals.

1.3.4 Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wires, bones, and other foreign objects which may damage the equipment or cause personal injury to the operator or bystanders.

1.4 OPERATION

Although hazard control and accident prevention are partially dependent upon the design and configuration of the equipment, these factors are also dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the equipment. It is essential that all Operator Safety Mechanisms be connected and in operating condition prior to use for mowing. Refer to the Operator's Manual for the mower for additional hazard control and accident prevention information.

⚠ WARNING

POTENTIAL HAZARD

- An uncovered discharge opening will allow objects to be thrown in operator's or bystander's direction. Also, contact with blade could occur.

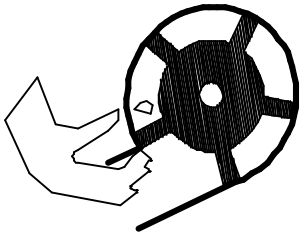
WHAT CAN HAPPEN

- Thrown objects or blade contact can cause serious injury or kill you or bystanders.

HOW TO AVOID THE HAZARD

- Never operate mower unless discharge deflector, entire grass collection system, or mulch kit is installed.

⚠ DANGER



POTENTIAL HAZARD

- There are rotating blades in the blower and under the mower deck.

WHAT CAN HAPPEN

- Blade contact can cause serious operator or bystander injury or even death.

HOW TO AVOID THE HAZARD

- Do NOT reach into Blower unless Rotation Indicator has Stopped. Disengage PTO, stop engine, remove key, WAIT FOR MOVING PARTS TO STOP
- Never operate mower unless discharge deflector, entire grass collection system, or mulch kit is installed.

1.4.1 Use *EXTREME* caution when mowing and/or turning on slopes as loss of traction and/or tip-over could occur. The operator is responsible for safe operation on slopes.

⚠ DANGER

POTENTIAL HAZARD

- Mowing on wet grass or steep slopes can cause sliding and loss of control.

WHAT CAN HAPPEN

- Wheels dropping over edges, ditches, steep banks, or water can cause rollovers, which may result in serious injury, death or drowning.

HOW TO AVOID THE HAZARD

- Do not mow slopes when grass is wet.
- Do not mow near drop-offs or near water.
- Do not mow slopes greater than 15 degrees.
- Reduce speed and use extreme caution on slopes.
- Avoid sudden turns or rapid speed changes.

- Use a walk behind mower and/or a hand trimmer near drop-offs, ditches, steep banks or water. This area can be dangerous, see Figure 1.

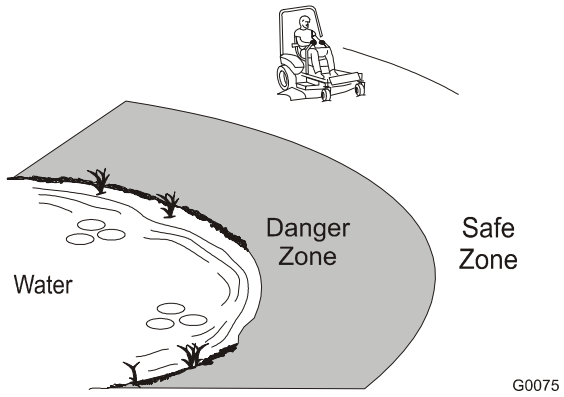


Figure 1

SAFE ZONE FOR MOWING

- Progressively greater care is needed as the slope increases.
- Always avoid sudden starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly off the slope.
- Avoid sudden starts when mowing uphill. Mower may tip backwards.
- Be aware that loss of traction may occur going downhill. Weight transfer to the front wheels may cause drive wheels to slip and cause loss of braking and steering.
- Watch for ditches, holes, rocks, dips, and rises that change the operating angle, as rough terrain could overturn the machine.
- Remove or mark obstacles such as rocks, tree limbs, etc. from the mowing area. Tall grass can hide obstacles.
- The operating characteristics of the machine will change with the Ultra Vac installed. The stability and traction of the machine will change as the Ultra Vac hopper fills with grass clippings. Use progressively greater care on slopes as the hopper fills.
- Always install and remove the Ultra Vac, including counterweights, as instructed. Failure to do so will cause a reduction in stability or traction. Do not operate the mower with only a portion of the Ultra Vac installed.

1.5 SAFETY SIGNS

1.5.1 Keep all safety signs legible. Remove all grease, dirt and debris from safety signs and instructional labels.

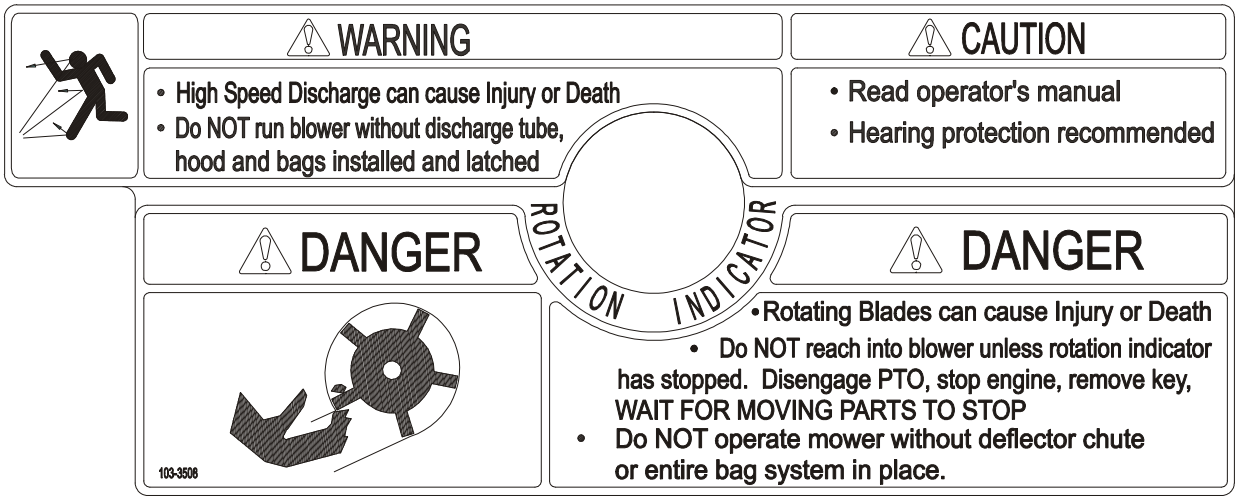
1.5.2 Safety signs must be replaced if they are missing or illegible.

1.5.3 When new components are installed, be sure that current safety signs are affixed to the replaced components.

1.5.4 New safety signs may be obtained from your authorized Exmark equipment dealer or distributor or from Exmark Mfg. Co. Inc.

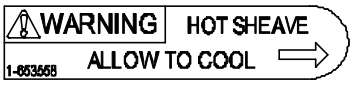
1.5.5 Safety signs may be affixed by peeling off the backing to expose the adhesive surface. Apply only to a clean, dry surface. Smooth to remove any air bubbles.

1.5.6 Familiarize yourself with the following safety signs and instruction labels. They are critical to the safe operation of your Exmark Ultra Vac.


WARNING
• High Speed Discharge can cause Injury or Death
• Do NOT run blower without discharge tube, hood and bags installed and latched
CAUTION
• Read operator's manual
• Hearing protection recommended
DANGER
ROTATION INDICATOR
DANGER
•Rotating Blades can cause Injury or Death
• Do NOT reach into blower unless rotation indicator has stopped. Disengage PTO, stop engine, remove key, WAIT FOR MOVING PARTS TO STOP
• Do NOT operate mower without deflector chute or entire bag system in place.
103-3508

LZUV52 Only
PART NO. 103-3508
LOCATION: Top of Blower

PART NO. 98-5954
LOCATION: Under Blower Cover



PART NO. 1-653558
LOCATION: Top of Idler Arm

WARNING
• UNDER NORMAL USE, THIS BAG WILL DETERIORATE AND WEAR. OBJECTS MAY EXIT A WORN BAG AT HIGH SPEEDS CAUSING INJURY OR DEATH.
• CHECK BAG FREQUENTLY FOR TEARS AND HOLES.
• REPLACE BAG WITH AN ORIGINAL EQUIPMENT BAG THAT BEARS THIS WARNING.
653554

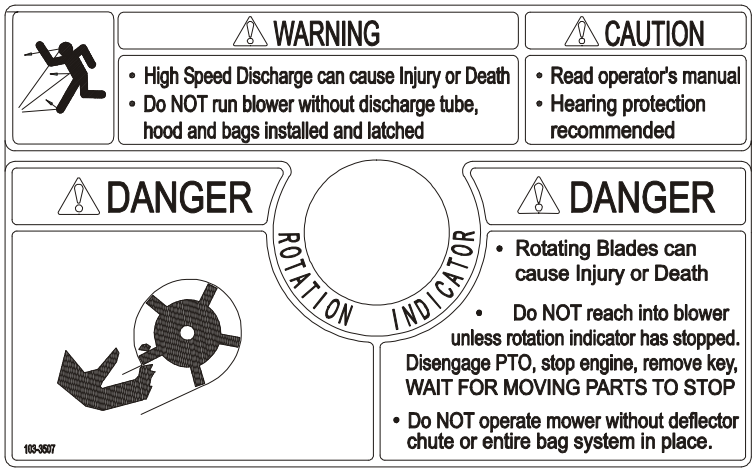
PART NO. 1-653554
LOCATION: Rear of Bags

WARNING
For units with 2 post Roll Bar installed:
• Front weight installed without bagger may cause Loss of Traction and Steering
• Bagger installed without front weights will cause Reduction of Stability.
• Install front weight ONLY when bagger is installed.
103-5894

PART NO. 103-5894
LOCATION: Top of Front Weight

WARNING
• Caster weights installed without bagger may cause Loss of Traction and Steering Control.
• Bagger installed without caster weights will cause Reduction of Stability.
• Install caster weights ONLY when bagger is installed.
103-0878

PART NO. 103-0878
LOCATION: - Top of Weights
- Top of Blower


WARNING
• High Speed Discharge can cause Injury or Death
• Do NOT run blower without discharge tube, hood and bags installed and latched
CAUTION
• Read operator's manual
• Hearing protection recommended
DANGER
ROTATION INDICATOR
DANGER
• Rotating Blades can cause Injury or Death
• Do NOT reach into blower unless rotation indicator has stopped. Disengage PTO, stop engine, remove key, WAIT FOR MOVING PARTS TO STOP
• Do NOT operate mower without deflector chute or entire bag system in place.
103-3507

LZUV60C & LZUV72C Only
PART NO. 103-3507
LOCATION: Top of Blower

SPECIFICATIONS

2.1 MODEL NUMBER:

LZUV52 – Fits Lazer Z with 52” deck

LZUV60 – Fits Lazer Z and Lazer Z XP with 60” deck

LZUV72 – Fits Lazer Z and Lazer Z XP with 72” deck

2.2 ACCESSORIES (Required for Ultra Vac installation)

NEWER UNITS			
UNIT	SERIAL NUMBER	DESCRIPTION	REQ'D TO MOUNT ULTRA VAC
Lazer Z 52	352,000 & Above	LZ w/524 Deck, 3/4" spindle nut (1 1/4 Hex)	103-2997 Drive Kit
Lazer Z 60	352,000 & Above	LZ w/604 Deck, 3/4" spindle nut (1 1/4 Hex)	None Required
Lazer Z XP 60	352,000 & Above	XP w/604 Deck, 3/4" spindle nut (1 1/4 Hex)	103-5631 Drive Kit
Lazer Z 72	352,000 & Above	LZ w/724 Deck, 3/4" spindle nut (1 1/4 Hex)	None Required
Lazer Z XP 72	352,000 & Above	XP w/724 Deck, 3/4" spindle nut (1 1/4 Hex)	103-5630 Drive Kit

OLDER UNITS					
UNIT	SERIAL NUMBER	DESCRIPTION	REQ'D TO MOUNT ULTRA VAC		
Lazer Z 52	159,999 & Below	LZ w/ 523 Deck, Greaseable Spindles	103-2997 Drive Kit 103-1369 Chute Kit 103-2547 Housing Kit 103-2998 Spindle Kit	**OR**	103-1079 Drive Kit 103-1369 Chute Kit
Lazer Z 52	160,000 - 259,999	LZ w/ 523 Deck	103-2997 Drive Kit 103-1369 Chute Kit 103-2998 Spindle Kit	**OR**	103-1076 Drive Kit 103-1369 Chute Kit
Lazer Z 52	260,000 - 351,999	LZ w/ 524 Deck, 5/8" spindle nut (15/16 Hex)	103-2997 Drive Kit 103-2999 Spindle Kit	**OR**	103-1076 Drive Kit
Lazer Z 60	159,999 & Below	LZ w/ 603 Deck, Greaseable Spindles	103-2547 Housing Kit 103-2998 Spindle Kit	**OR**	103-0576 Jackshaft
Lazer Z 60	160,000 - 189,999	LZ w/ 603 Deck	103-2998 Spindle Kit	**OR**	103-0576 Jackshaft
Lazer Z 60	190,000 - 259,999	LZ w/ 604 Deck, stiffening rings on bottom	103-3140 Spindle Kit	**OR**	103-0576 Jackshaft
Lazer Z 60	260,000 - 351,999	LZ w/ 604 Deck, stiffening rings on top, 5/8" spindle nut (15/16 Hex)	103-2999 Spindle Kit	**OR**	103-0576 Jackshaft
Lazer Z XP 60	351,999 & Below	XP w/ 604 Deck, 5/8" spindle nut (15/16 Hex)	103-5631 Drive Kit 103-2999 Spindle Kit	**OR**	103-5631 Drive Kit 103-0576 Jackshaft
Lazer Z 72	259,999 & Below	LZ w/ early 724 Deck, w/o accessory mounting tube	103-2999 Spindle Kit 103-0583 Accy Tube Kit	**OR**	103-0577 Jackshaft 103-0583 Accy tube Kit
Lazer Z 72	260,000 - 351,999	LZ w/ 724 Deck, w/ accessory mounting tube, 5/8" spindle nut (15/16 Hex)	103-2999 Spindle Kit	**OR**	103-0577 Jackshaft
Lazer Z XP 72	351,999 & Below	XP w/ 724 Deck, 5/8" spindle nut (15/16 Hex)	103-5630 Drive Kit 103-2999 Spindle Kit	**OR**	103-5630 Drive Kit 103-0577 Jackshaft

2.3 DIMENSIONS

2.3.1 Overall unit length w/ Ultra Vac

	52" Deck	60" Deck	72" Deck
Lazer Z - Air Cooled	105.70" (268.5 cm)	106.65" (270.9 cm)	110.75" (281.3 cm)
Lazer Z - Liquid Cooled	106.00" (269.1 cm)	106.90" (271.5 cm)	111.00" (281.9 cm)
Lazer Z XP		107.90" (274.1 cm)	112.00" (284.5 cm)

2.3.2 Overall unit width w/ Ultra Vac

Lazer Z and Lazer Z XP	
52" Deck	66.85" (169.8 cm)
60" Deck	74.44" (189.1 cm)
72" Deck	86.49" (219.7 cm)

2.4 BAGGING SYSTEM

2.4.1 Overall weight

Lazer Z and Lazer Z XP	
52” Deck	254 lbs. (115 kg)
60" Deck	324 lbs. (147 kg)
72" Deck	271 lbs. (123 kg)

2.4.2 Collections bins: Commercial grade, cloth mesh bags with reinforced bottoms.
Capacity: Lazer Z 52” - 8 bushels (2 bags and hood)
All 60 and 72” decks – 13.4 bushels (3 bags and hood)

2.4.3 Dump Mechanism: Manual lift off

2.4.4 Blower tube: fixed, abrasion resistant molded polyethylene

2.4.5 Impeller: 5-bladed, 0.25” thick abrasion resistant steel, with vertical axis.

2.4.6 Impeller bearings: 1” (2.54 cm) sealed “non-greaseable bearings”

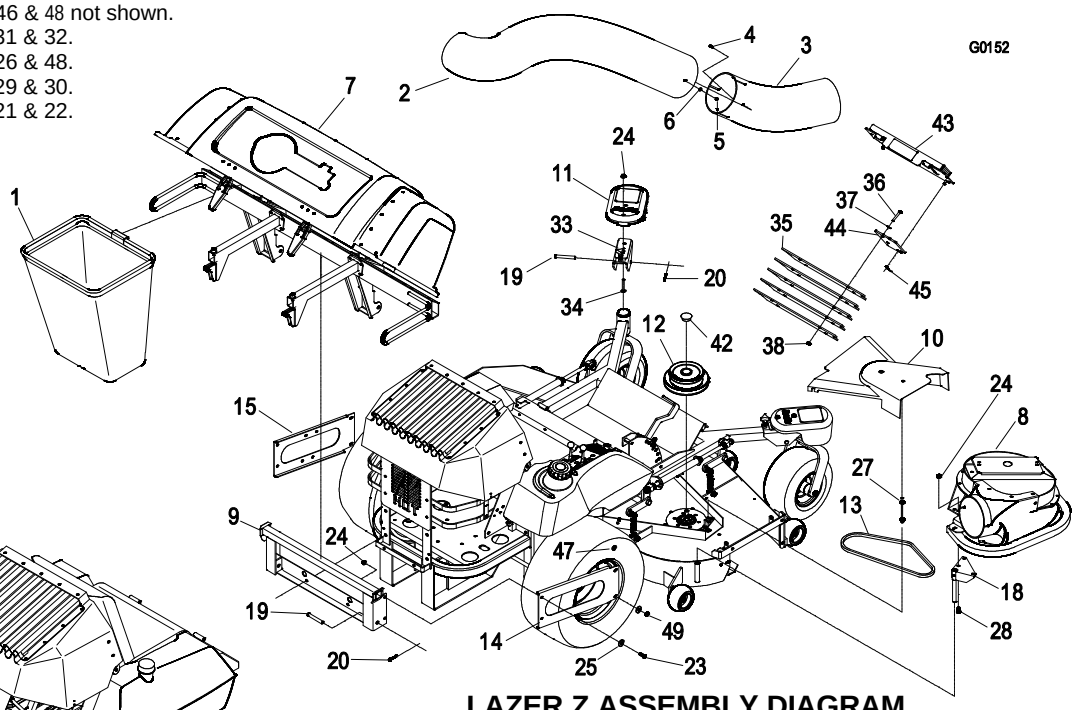
3. ASSEMBLY INSTRUCTIONS – LAZER Z & LAZER Z XP

3.1 ASSEMBLY DIAGRAM

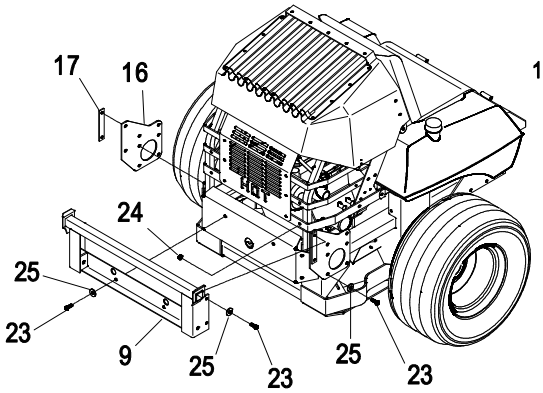
Ref . No.	Description	Qty (52 LZ)	Qty (60&72 LZ)	Qty (60&72 XP)
1	Bag Assembly	2	3	3
2	Upper Tube	1	1	1
3	Lower Tube	1	1	1
4	#10-24 CRPH Screw	3	6	6
5	#10-24 Nyloc Nut	3	6	6
6	#10 Flat Washer	3	6	6
7	Hood Assembly	1	1	1
8	Blower Assembly	1	1	1
9	Bagger Mount Weldment	1	1	1
10	Belt Cover	1	1	1
11	Caster Weight	2	2	2
12	Jackshaft	1	1	1
13	Blower Drive Belt	1	1	1
14	Frame Bracket RH	1	1	
15	Frame Bracket LH	1	1	
16	Frame Bracket XP			2
17	XP Mount Spacer			2
18	Mount Pin Weldment		1	1
19	Clevis Pin	4	4	4
20	Hair Pin (large)	4	4	4
21	Chute Pivot Pin	1	1	1
22	Hair Pin (small)	1	1	1
23	3/8-16 x 1.00 Hex Screw	8	8	10
24	3/8 Whizlock Nut	8	11	13
25	3/8 Spring Disk Washer	12	12	14

Ref . No.	Description	Qty (52 LZ)	Qty (60&72 LZ)	Qty (60&72 XP)
26	Blocker Plate (small)	1		
27	Belt Shield Stud		1	1
28	3/8-16 x .75 Hex Screw		3	3
29	Belt Cover Spacer		1-60 Only	1-60 Only
30	7/16 Spring Disk Washer		2-60 only	2-60 only
31	Washer – ¼ thick	2	2-60 only	
32	3/8-16x3.25 Tap Bolt	2	2-60 only	
33	Weight Bracket	2	2	2
34	3/8-16 Square Head Bolt	4	4	4
35	Weight Plate	4	4	4
36	5/16-18 x 1.75 Hex Screw	4	4	4
	5/16-18 x 1.5 Hex Screw	4	4	4
37	5/16 Flat Washer	4	4	4
38	5/16-18 Whizlock nut	6	4	4
39	Belt Cover Support	2		
40	Knob	1		
41	5/16-18 x .75 Hex Screw	2		
42	Plug	1	1	1
43	Weight Plate Weldment		1	1
44	Weight Mounting Plate		1	1
45	Hairpin		1	1
46	Drill Template	1	1	1
47	Spacer	6	6	6
48	Plate, Reinforcement	1		
49	Nut, Nyloc Thin	2	2	2

Items 21, 22, 26, 29, 30, 31, 32, 46 & 48 not shown.
See figure 1 for installation of 31 & 32.
See figure 4 for installation of 26 & 48.
See figure 5 for installation of 29 & 30.
See figure 9 for installation of 21 & 22.



LAZER Z ASSEMBLY DIAGRAM
(Shown without ROPS for clarity)



LAZER Z XP ASSEMBLY DIAGRAM
(Shown without ROPS for clarity)

- 52" Lazer Z units with serial numbers below 260,000 require the use of adapter kit 103-1369. Follow the instructions included in the kit when noted in the following steps.
- 72" units below serial number 260,000 require the deck to be modified by adding the accessory mounting tube. Exmark kit 103-0583 contains the parts and templates to do this.

3.2 INSTALL THE HOOD ASSEMBLY AND BAGS

Lazer Z units only (Lazer Z XP units skip to step 3.2.7)

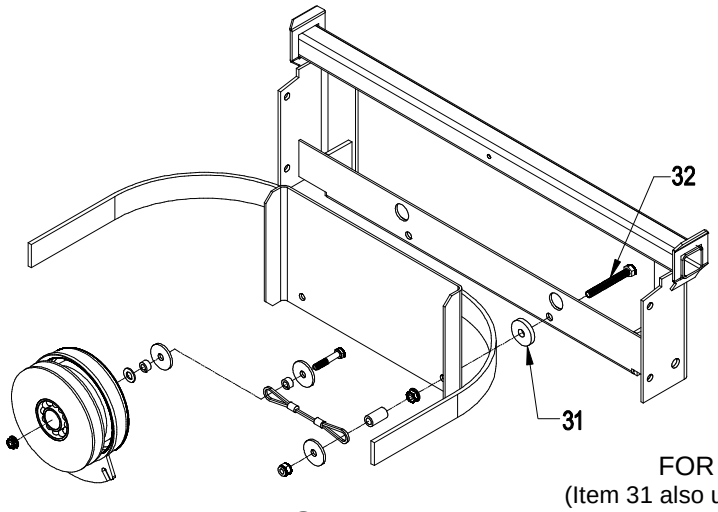
3.2.1 When installing the Ultra Vac onto a liquid cooled Lazer Z, the rear bumper plate must be removed. Remove rear bumper plate. Reattach the lower side bumper bars to the vertical "HOT" engine guard shield using two of the original screws, washers and whizlock nuts removed from the bumper plate.

3.2.2 Remove the lower two screws holding the clutch guard plate ("HOT" engine guard on liquid cooled units) to the rear frame of the Lazer Z unit. Units with serial numbers 149,999 and below will require disassembly of the clutch strap spacers to remove these screws.

3.2.3 On units with serial numbers above 190,000 install the mount weldment (Item 9) loosely to the rear of the machine using the two bolts and nuts removed in section 3.2.2.

For units with serial numbers 189,999 and below, install washers (Item 31) between the bagger mount weldment and clutch guard when installing the bagger mount weldment. This will provide for proper alignment of the mount holes with the holes in the bagger assembly (See figure 1).

For units with serial numbers 149,999 and below, remove the two tap bolts that tie the clutch straps to the clutch guard and replace with new tap bolts (Item 32). These units also require the use of the washers (Item 31) between the bagger mount weldment and the clutch guard. These parts should be installed when the bagger mount weldment is installed on the rear of the unit (See figure 1).



FOR SN 149,999 ONLY
(Item 31 also used for SN 150,000-189,999)

FIGURE 1

3.2.4 Jack the rear of the unit up and safely support it on jack stands. Remove the rear wheels.

⚠ CAUTION
POTENTIAL HAZARD ♦ Relying solely on mechanical or hydraulic jacks to support the mower could be dangerous.
WHAT CAN HAPPEN ♦ The mechanical or hydraulic jacks may not be enough support or may malfunction allowing the unit to fall, which could cause injury.
HOW TO AVOID THE HAZARD ♦ DO NOT rely solely on mechanical or hydraulic jacks for support. Use adequate jack stands or equivalent support.

For units with a 2 post folding ROPS installed: Temporarily remove the ROPS to allow for installation of the Ultra Vac.

3.2.5 Install the right and left hand frame brackets (Items 14 and 15) loosely to the mount weldment and the wheel channels of the Lazer Z frame. The flanges on the side plates should face in towards the unit to provide the maximum tire clearance.

NOTE: On units with a ROPS installed, the lower front screw that attaches to the wheel motor channel must be left uninstalled. Units with Serial Numbers above 440,000 will have a captured bolt in this position. See Figure 2.

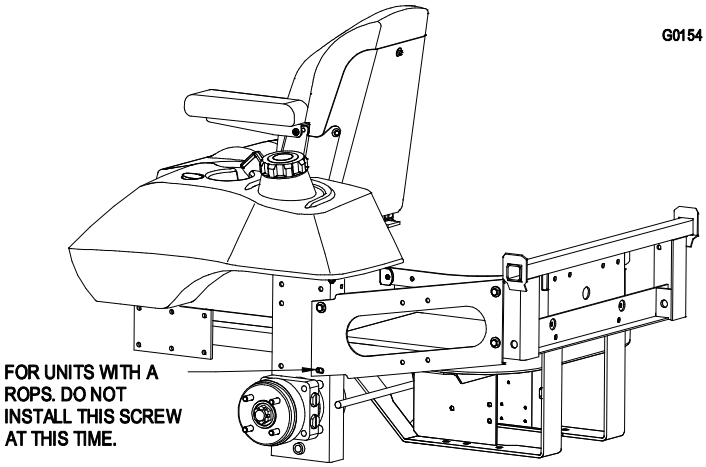


FIGURE 2

Use the 3/8-16 x 1.00 bolts (Item 23), 3/8 spring disk washers (Item 25) and 3/8-16 whizlock nuts (Item 24). Make sure that the raised portion of the spring disk washer faces the head of the bolt.

NOTE: On 52 and 60 inch units, the lower bolt on the wheel channel is best installed by positioning the nut behind the hole using a deep socket and turning the bolt through the hole into the nut.

For installation (or re-installation) of a 2 post foldable ROPS on Lazer Z units:

3.2.6 Install the two lower roll bar tubes.

a) Align three spacers (Item 47) on each side and tape with masking tape to the rear frame as shown in Figure 3.

b) Locate the left and right lower roll bar tubes.

c) Align lower roll bar tubes along wheel motor channels as shown in Figure 3.

d) **LOOSELY** install the lower roll bar hardware to the tubes in the following order (Reference Figure 3 for alignment and installation instructions below):

1) Discard the 3/8-16 regular nyloc nut provided with the Lazer Z unit or ROPS kit and replace with the 3/8-16 thin nyloc nut (Item 49) provided with this Ultra Vac.

2) Install the 3/8-16 thin nyloc nut (Item 49) and a spring disk washer to the bolt protruding from the wheel motor channel as shown.

NOTE: Be sure the spring disk washer cone is installed towards the nyloc nuts.

Units with Serial Numbers below 440,000 require use of a 3/8-16 x 1 1/2 screw, spring disk washer and whizlock nut. These items are included with ROPS kit number FRPSLZ.

NOTE: On 60 inch units, the lower bolt on the wheel channel is best installed by positioning the nut behind the hole using a deep socket and turning the bolt through the hole into the nut.

2) Install one 3/8-16 x 1 1/2 hex capscrew, spring disk washer and 3/8-16 whizlock nut to the top front hole as shown (it will be necessary to push the capscrew through the masking tape applied in step a).

3) Install one 3/8-16 x 1 1/2 hex capscrew, spring disk washer and 3/8-16 whizlock nut to the top rear hole as shown (it will be necessary to push the capscrew through the masking tape applied in step a).

4) Install one 3/8-16 x 4 1/2 hex capscrew, spring disk washer and 3/8-16 whizlock nut through the top tube as shown (it will be necessary to push the capscrew through the masking tape applied in step a).

NOTE: Be sure the spring disk washer cone is installed towards the head of all capscrews.

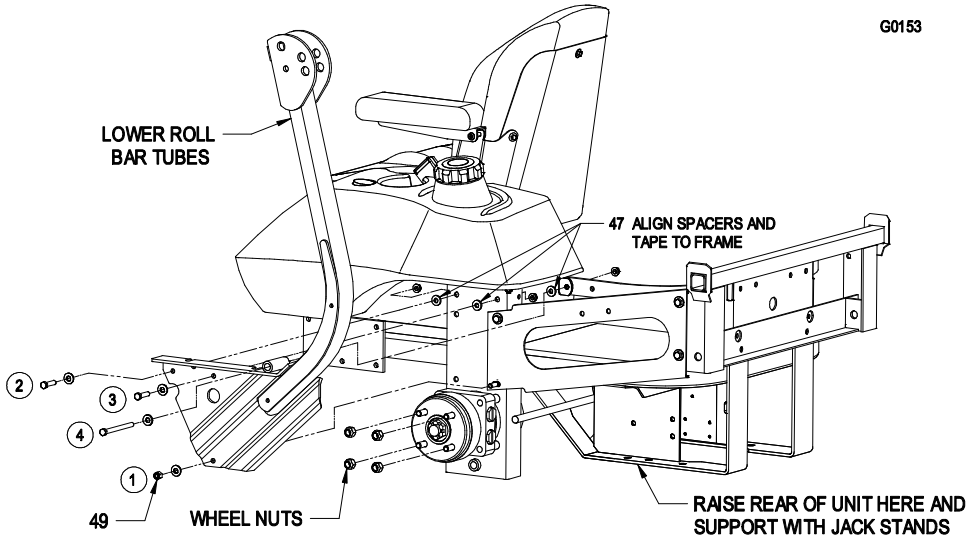


FIGURE 3
LOWER ROLL BAR INSTALLATION

Lazer Z XP units only (Lazer Z units continue at step 3.2.11)

3.2.7 Install mount weldment (Item 9) loosely to the rear bumper using the two holes provided. Use the 3/8-16 x 1.00 screws (Item 23), 3/8 spring disk washers (Item 25) and 3/8-16 whizlock nuts (Item 24).

3.2.8 Install the frame brackets (Item 16) and spacers (Item 17) loosely to the mount weldment (Item 9) Use the (2) 3/8-16 x 1.00 screws (Item 23), (2) 3/8 spring disk washers (Item 25) and (2) 3/8-16 whizlock nuts (Item 24). Make sure that the raised portion of the spring disk washer faces the head of the screw.

3.2.9 *For units without a ROPS installed:* Install the frame brackets (Item 16) to the mounting pads on the Lazer Z XP frame. Use (4) 3/8-16 x 1.00 screws (Item 23), (4) 3/8 spring disk washers (Item 25 and (4) 3/8-16 whizlock nuts (Item 24). Make sure that the raised portion of the spring disk washer faces the head of the screw.

3.2.10 *For units with a ROPS installed:* Install the frame brackets (Item 16), and ROPS lower roll bar tubes LOOSELY to the mounting pads on the Lazer Z XP frame. Use the ROPS mounting hardware, 3/8-16 x 1 ½ screws, 3/8 spring disk washers and 3/8-16 whizlock nuts. Make sure that the raised portion of the spring disk washer faces the head of the screw. See Figure 4.

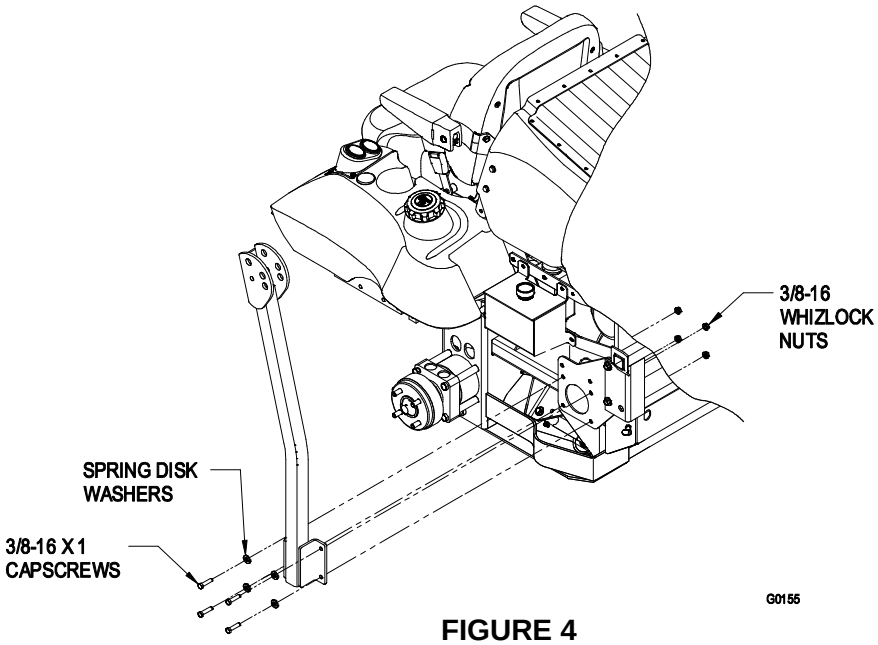


FIGURE 4
LOWER ROLL BAR INSTALLATION

3.2.11 *All units with a ROPS installed:* Install the upper u-shaped section of the roll bar. (Reference Figure 5 for alignment and installation instructions below):

a) Locate the latch pin assemblies (pin and hairpin connected with a lanyard).

b) Install a 1/2-13 x 3 1/4 capscrew in the washer on the lanyard of each pin assembly.

Note: Make sure the bent tab in the washer points toward the head of the capscrew.

b) Lightly oil the inside surfaces of the ear-shaped plates at the upper end of the lower roll bar tubes.

c) Locate the upper u-shaped section of the roll bar. Install the upper roll bar section using one 1/2-13 x 3 1/4 capscrew (from step b) and one 1/2-13 hex flange lock nut on each side. Do not over tighten. Make sure upper roll bar can pivot freely.

Notes:

- Make sure the capscrew and nuts are installed with the nut to the inside of the roll bar.
- Make sure the tab on the lanyard washer is installed as shown and points toward the front of the unit.

d) Raise the roll bar into the upright position and secure with the latch pin assemblies on each side. Install latch pin from outer surface of roll bar assembly and secure with the hairpin to the inside.

e) Tighten the front knobs against the upper roll bar ends.

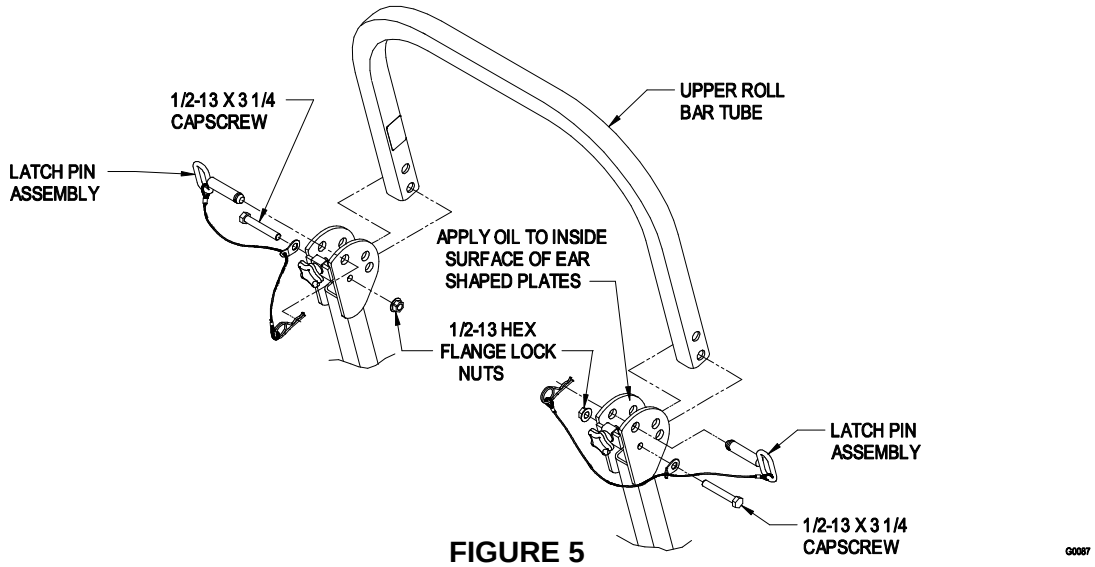


FIGURE 5
UPPER ROLL BAR INSTALLATION

3.2.12 *All units:* Tighten all hardware that attaches the Ultra Vac mount to the machine frame. Start with the screws that hold the mount weldment tot the rear of the unit and work forward.

3.2.13 *All units with a ROPS installed:* Torque all lower roll bar hardware attached to the machine frame to 30-35 ft-lbs. (41-47 N-m).

3.2.14 *All Lazer Z units:* Reinstall the rear wheels and lower the unit from the jack stands.

3.2.15 Apply a light coat of grease to the front and rear of the upper tube of the mount weldment. Install the bagger assembly (Item 7) onto the mount by slipping the hook protion over the top mounting tube of the mount weldment. Secure the assembly to the mount using the clevis pins (Item 19) and hairpins (Item 20).

3.2.16 Install the bag assemblies (Item 1) by inserting the hook portion into the slots in the cross bar of the hood assembly.

3.3 INSTALL BLOWER ASSEMBLY

3.3.1 Lower the deck fully. Remove the right hand belt cover. Remove the belt cover mounting stud that protrudes from the deck.

3.3.2 Remove the deck drive belt from around the right hand spindle sheave.

3.3.3 Support the right mower blade and shaft so that it will not fall out of the deck when the right sheave nut is removed.

3.3.4 Remove the right sheave nut, spring disk washer, and sheave from the spindle shaft.

NOTE: On units with wrench flats on the spindle just above the blade use a 1-inch wrench on the flat sides of the spindle shaft to prevent the spindle from turning. On units that do not have a wrench flat, block the blade rotation with a block of wood between the blade and baffles as indicated in the blade service section of the Lazer operator's manual. Do not use the blade bolt to prevent rotation.

On units with serial numbers below 352,000 replace the spindle shaft. Reference Section 2.4 to determine which kit(s) are required to replace the spindle shaft.. Remove the spindle shaft / blade assembly from the mower. Transfer the blade from the original shaft to the new spindle shaft and reinstall the assembly onto the mower.

3.3.5 Apply a light coat of Mobil HTS grease (or food grade antisieze) to the top portion of the spindle shaft where the sheave mounts.

3.3.6 Install the double sheave (Item 12) onto the right spindle shaft. Install the spring disk washer and nut. Make sure that the spring disk washer cone is installed towards nut (See figure 6). Torque the sheave nut to:

5/8 - 11 nut (15/16 Hex) - 75-80 ft. lbs.
3/4 -16 nut (1 ¼ Hex) – 140-145 ft. lbs.

NOTE: On units with wrench flats on the spindle just above the blade use a 1-inch wrench on the flat sides of the spindle shaft to prevent the spindle from turning. On units that do not have a wrench flat, block the blade rotation with a block of wood between the blade and baffles as indicated in the blade service section of the Lazer Z operator's manual. Do not use the blade bolt to prevent rotation. Check blade bolt torque after completing this installation (115 – 120 ft. lbs.).

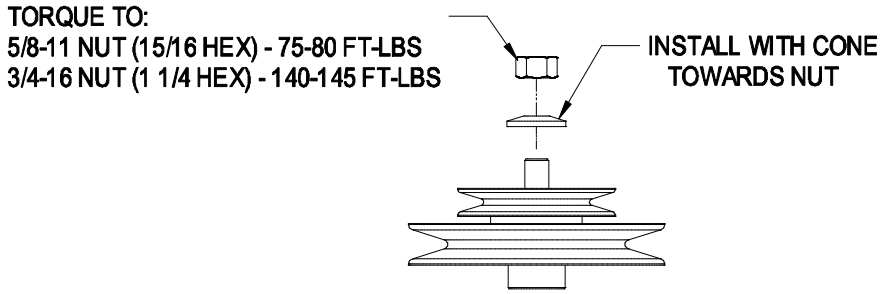


FIGURE 6

3.3.7 Re-install the deck drive belt in the lower groove of the double sheave. Install the plug (Item 24) into the bore of the double sheave.

3.3.8 Remove the discharge chute from the deck. Discard the mounting hardware, but save the discharge chute for use during side discharge operation. The chute pivot pin (Item 21) and hairpin (Item 22) may be stored in the pivot holes on the discharge chute during bagging operation.

52 inch units only (60 and 72 inch units skip to step 3.3.15)

3.3.9 Remove the belt guide on the blower (See figure 7)

3.3.10 Install the belt (Item 13) included in the completing kit onto the blower assembly as shown.

3.3.11 Reinstall the belt guide removed in step 3.3.9.

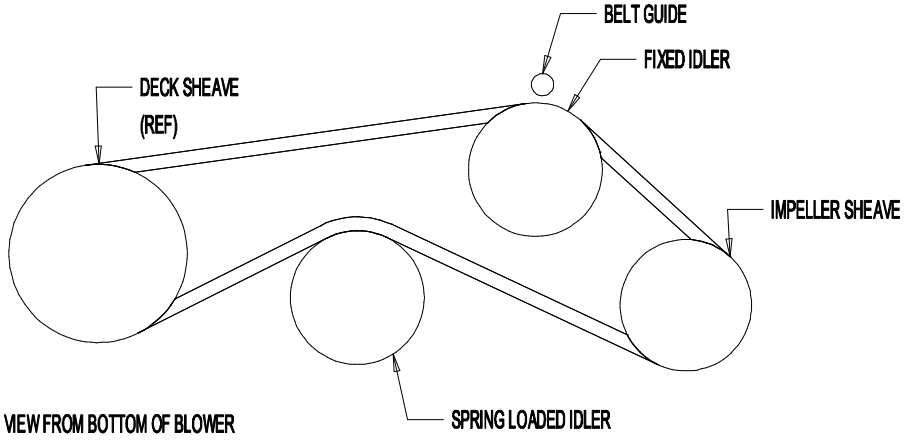


FIGURE 7
BELT ROUTING

3.3.12 If the Ultra Vac is being installed on a Lazer Z with a serial number less than 260,000, it is recommended to replace the steel blocker plate mounted across the bottom of the blower with the reinforcement plate (Item 48) and small blocker plate (Item 26) included in the completing kit. Use the hardware that was removed when removing the large blocker plate (See figure 8). **Failure to install a blocker plate will create a thrown object hazard that could injure or kill bystanders, or cause property damage**. This modification should not be done if the Ultra Vac blower will be mounted on a Lazer Z with a serial number of 260,000 or higher.

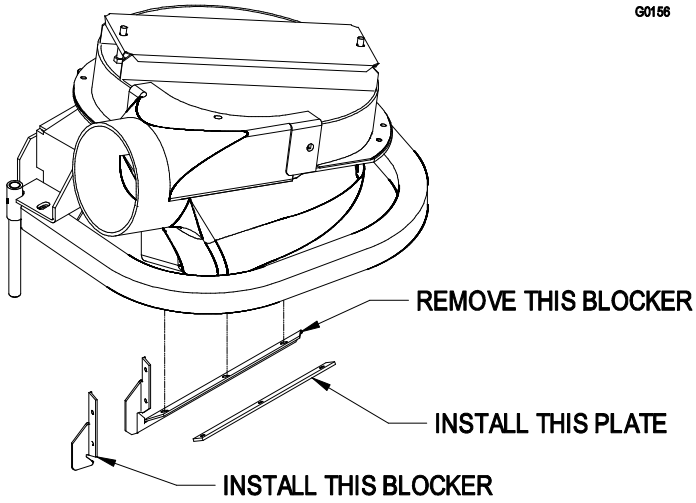


FIGURE 8
LAZER Z 52 UNITS WITH SERIAL NUMBERS LESS THAN 260,000 ONLY

3.3.13 The front right deck stiffener must be trimmed for belt clearance on 52" Lazer Z units with serial numbers less than 220,000. Measure and mark the deck stiffener (See figure 9). Trim off the indicated portion of the stiffener. Touch up the trimmed area with Exmark red touchup paint – P/N 1-850337.

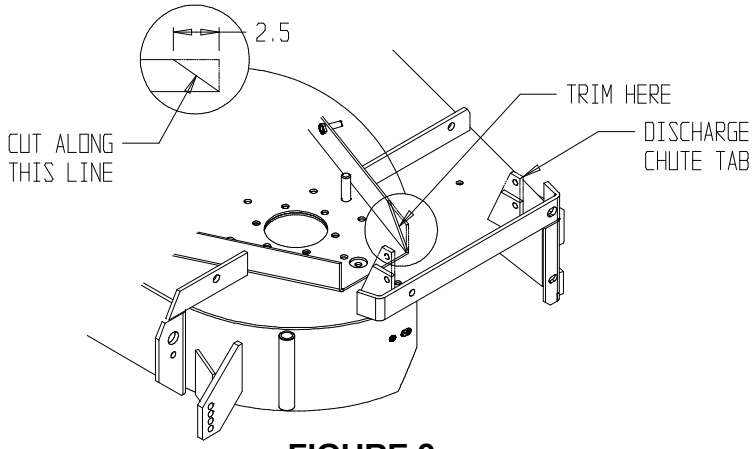


FIGURE 9
LAZER Z 52 UNITS WITH SERIAL NUMBERS LESS THAN 220,000 ONLY

3.3.14 Using the knob that was removed with the original belt cover stud and the knob included with the completing kit (Item 40), mount the two belt cover supports (Item 39) to the plastic belt cover (Item 10). Position the belt cover on the mower deck. The lower ends of the belt cover supports should rest on the outside of the deck stiffeners. Mark the location of the belt cover support holes on the deck stiffeners. Remove the belt cover. Center punch and drill 3/8" holes.

3.3.15 Remove the belt cover supports from the belt cover and mount them to the deck using the 5/16-18 x .75 screws (Item 41) and whizlock nuts (Item 38).

3.3.16 Units with serial numbers below 260,000 will require modifications to the discharge chute tabs per the instructions in adapter kit 103-1369. Follow the instructions included in the kit before proceeding with the blower installation.

60 AND 72 INCH UNITS ONLY (52 INCH UNITS CONTINUE AT 3.3.21)

3.3.17 Install the belt cover mounting stud (Item 27) included.

For 60 inch units only, install the spacer (Item 29), two 7/16 spring disk washers (Item 30) and the plastic knob (See figure 10). The knob does not need to be tightened against the washers at this time.

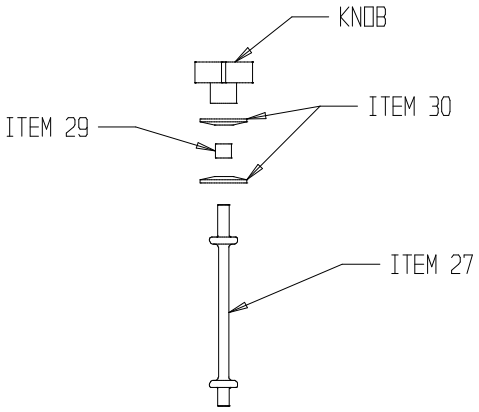


FIGURE 10

3.3.18 Install the mounting pin weldment (Item 18) to the blower assembly using the 3/8-16 x .75 bolts (Item 28) and whizlock nuts (Item 24). Maximum deck clearance will be provided if the bolts are installed from below the mounting pin. The mount pin can be installed in two positions. For 60 inch decks the pin should be installed as far away from the bumper end as possible. For 72 inch decks that pin should be installed close to the bumper end (See figure 11).

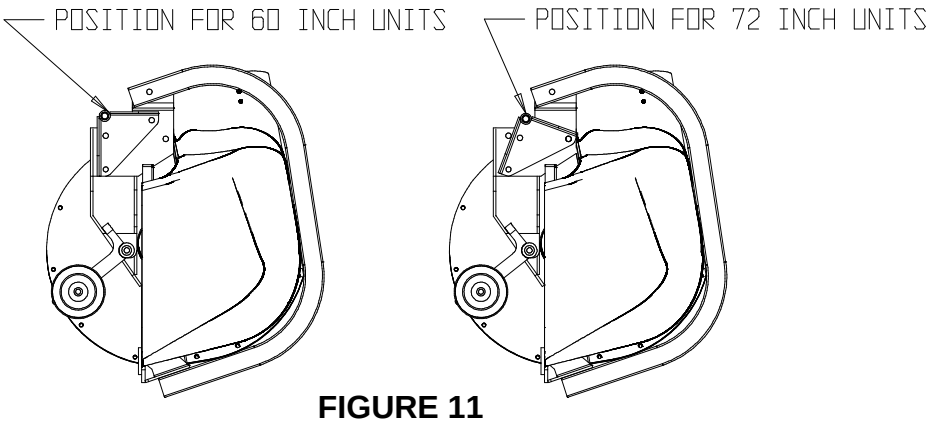


FIGURE 11

3.3.19 Install the belt (Item 13) onto the blower by working it around the impeller sheave.

3.3.20 72" units below serial number 260,000 will require the deck to be modified by adding the accessory mounting tube. Exmark kit 103-0583 contains the parts and templates required. Follow the instructions in this kit. These decks will also require drilling the hole at the front upper corner of the discharge opening to ½ inch diameter (See figure 12). Touch up with red paint Exmark P/N 850337.

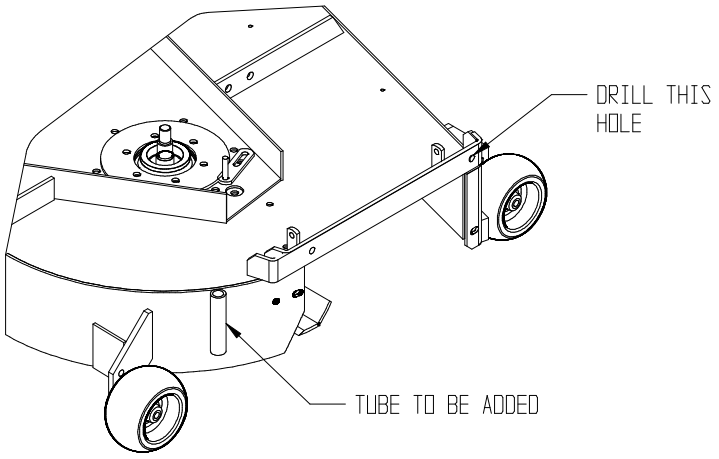


FIGURE 12
72 UNITS WITH SERIAL NUMBERS
LESS THAN 260,000 ONLY

ALL UNITS:

3.3.21 Mount the blower on the deck by sliding the mounting pin into the tube at the rear right corner of the deck. Swing the blower closed. Adjust the position of the front pin to engage the slot in the front of the deck. Use the latch to lock the blower in this position. Adjust the tension on the latch to hold the blower up to the deck, yet allow for release by hand.

3.3.22 Pull the spring loaded idler back and slip the belt over the top sheave on the deck spindle.

3.3.23 Install the plastic belt cover (Item 10). On 60" units the outside end of the cover is slotted and can slip between the two washers assembled in step 17. The plastic knob does not need to be removed. On 72" and 52" units the cover has a hole, and the plastic knob must be installed after the cover has been positioned. **The original belt cover stud must be removed on 52" units.**

3.4 ASSEMBLE THE TUBES

3.4.1 Remove the six screws, nuts, and washers (Items 4, 5, and 6) from the lower tube (Item 3) and slide the lower and upper tube (Item 2) together. The arrow on the upper tube should align with the dimple on the lower tube. On 60 and 72 inch units there are two sets of holes on the lower tube. The first set reached is for use with Lazer XP units. The second set reached is for Lazer Z units. Align the arrow on the upper tube with the dimple on the lower tube and slide them together until the proper set of holes is reached.

3.4.2 Fasten the upper and lower tubes together using three of the hardware sets removed from the lower tube in step 14. The heads of the screws must be inside the tube to prevent accumulation of grass inside the tube. The washer and the nut should be installed on the outside of the tube. On Lazer XP units, use the remaining three hardware sets to plug the exposed holes in the lower tube. On Lazer Z units, discard the remaining hardware sets.

3.4.3 Slip the upper end of the tube assembly into the hood opening. Slide the lower end of the tube assembly over the blower outlet and align the notch with the tube latch. Latch the tube to the blower.

3.5 INSTALL THE WEIGHT PLATES

3.5.1 The four weight plates (Item 35) must be installed under the front panel of the floor pan. These weights give proper balance to the machine when the removable portions of the bagger are removed.

Units with the 2 post foldable ROPS installed require additional mounting plates (Item 44) and a front weight (Item 43) to be installed. The front weight is removable and retained by using hairpins (Item 45).

Lazer Z units prior to 440,000:

3.5.2 Locate the position of the mounting holes. Clamp a weight plate to the front of the floor pan (See Figure 13). The ears on the weight plate should be towards the bottom (upside down from the actual mounted position). Align the bottom edge of the weight plate with the bottom edge of the floor pan front panel. Center the weight plate side to side. Mark the position of all four holes using a center punch.

3.5.3 Drill 3/8 inch holes at the points marked.

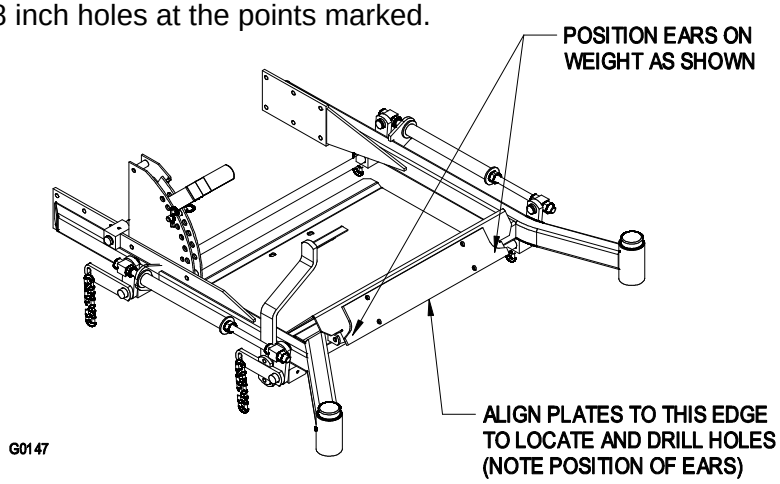


FIGURE 13
FLOORPAN WEIGHT INSTALLATION

3.5.4 *For Lazer Z units under 440,000 without a ROPS installed:* Open the floor pan and install the four weight plates behind the front panel using the 5/16-18 x 1.50 screws, 5/16 washers and 5/16-18 whizlock nuts (Items 36, 37, and 38). The weight plates will only fit with the ears located near the bend in the floor pan (See Figure 14). The decal on the outside of the floor pan will still be visible with the weight plates mounted.

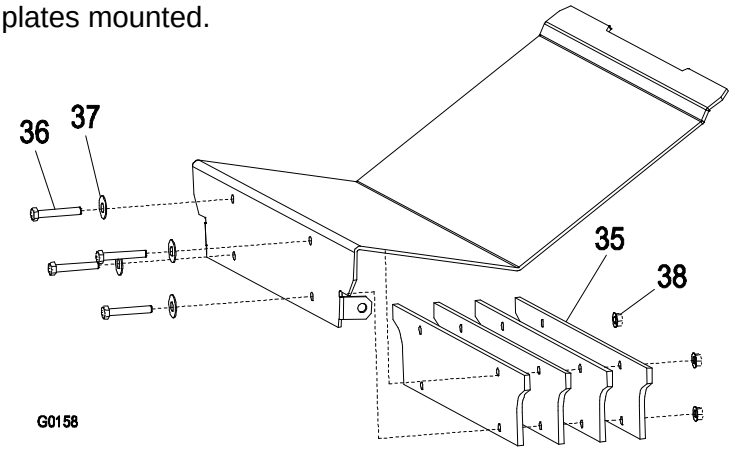


FIGURE 14
FLOORPAN WEIGHT INSTALLATION
(SN UNDER 440,000 without a ROPS)

3.5.6 *For Lazer Z units under SN 440,000 with a ROPS:* Open the floor pan and install (4) weight plates behind the front panel and (2) weight mounting plates (Items 35, and 41) as shown in Figure 15 using (4) 5/16-18 x 2.0 screws, (4) 5/16 flat washers, and (4) 5/16-18 whizlock nuts (Items, 36, 37, and 38).

3.5.7 Hook weight plate assembly (Item 40) over the top of the weight mounting plates and secure with two hairpins (Item 42) as shown in Figure 15.

Note: The removable weight is heavy. Use care when lifting. Make sure that you can hold the weight securely before lifting. Use caution when positioning your hands so that you do not set the weight down on your hands or fingers.

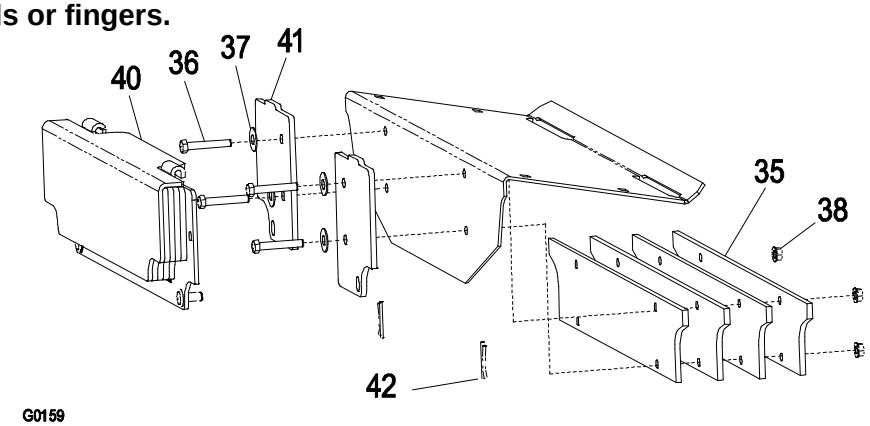


FIGURE 15
(All units with a ROPS)

Lazer Z units SN 440,000 and higher:

3.5.8 Locate the position of the mounting holes by aligning the template (P/N 103-5865) on the front face of the floor pan as shown in Figure 16. Clamp the template in place. Using a center punch, mark the positions of the holes on the floor pan. Flip the template over and repeat step one on the other end of the floor pan face.

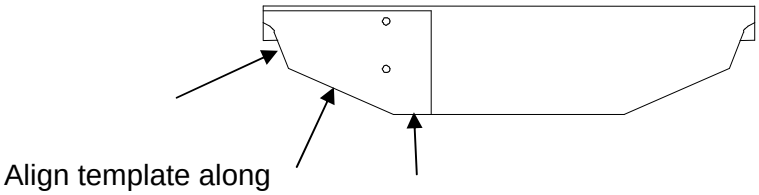


FIGURE 16

3.5.9 Drill 3/8" holes at the points marked.

3.5.10 Follow steps 3.5.6 through 3.5.7 for weight installation (See Figure15).

3.6 INSTALL THE REMOVABLE WEIGHTS

Note: The removable weights are heavy. Use care when lifting them. Make sure that you can hold them securely before lifting them. Use caution when positioning your hands so that you do not set them down on your hands or fingers.

3.6.1 Assemble the weight brackets (Item 33) to the removable weights (Item 11) using the 3/8-16 square head bolts (Item 34) and 3/8 whizlock nuts (Item 25).

3.6.2 Install the removable weight assemblies over the caster arms. On 52 and 60 inch Lazer Z machines one weight has a wide mounting bracket and one has a narrow bracket. They will only fit the machine one way. Weights for the 60 Lazer XP and all 72s are interchangeable left and right.

3.6.3 Install a clevis pin (Item 19) and hairpin (Item 20) on each caster weight to retain them.

3.6.4 Tighten knob on weight assembly until the weight is clamped securely to the caster arm.

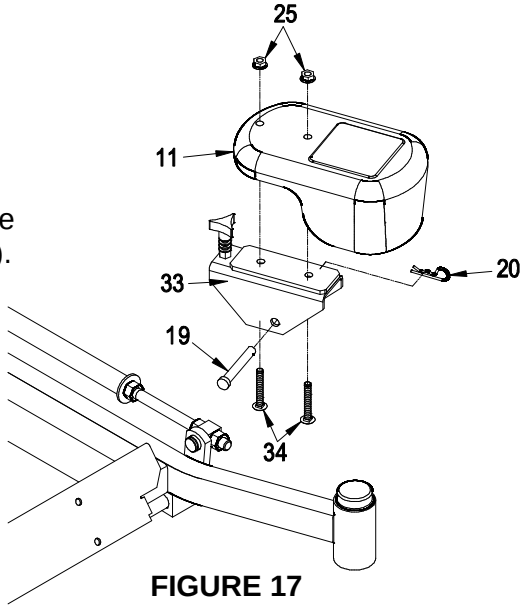


FIGURE 17
REMOVABLE WEGHT INSTALLATION

3.7 RUN IN – 52" UNITS ONLY

3.7.1 Follow the operation instructions in Section 5 to run the unit. Run the unit with the blades and blower engaged for 2 minutes. Disengage the blades, stop engine and wait for all moving parts to stop. Remove key.

3.7.2 Remove the belt cover and check to make sure that the belt is riding near the center of the flat idler on the idler arm. If the belt is not riding near the center of the idler, remove the blower, and bend the idler arm slightly. Reinstall the blower and belt cover and perform steps 1 and 2 again to verify belt position.

4. OPERATION:

4.1 PRE-START

4.1.1 Read the operator's manual for your mower and familiarize yourself with all controls before operating the machine. Make sure that you understand the controls, their locations, their functions, and their safety requirements.

4.1.2 Ensure the blower, belt cover, bags, tube and hood are in good condition, properly attached, and latched.

Note: When mowing in areas with sandy soil, use low lift blades on the cutting deck and higher cutting heights to minimize wear on the blower components.

4.2 MOWING

4.2.1 The Ultra Vac blower operates when deck drive is engaged. Be sure that ***all*** persons are ***clear*** of the mower deck and blower ***before engaging*** the cutting blades. Set the throttle to "midway" position. Pull outward on the PTO switch to the "ROTATE" position. Accelerate to full throttle to begin mowing.

4.2.2 To disengage the deck drive and blower, set the throttle to "midway" position. Push in on the PTO switch to the "STOP" position to stop the cutting blades and blower. The cutting blades will require a slightly longer amount of time to come to a complete stop when the blower is installed on the deck.

4.2.3 To remove the bags, shut off deck drive, stop the engine and wait for all moving parts to stop. Open the hood and remove the bags by lifting up on the rear of the bag, then unhooking the front clip. Empty bags by inverting them.

4.2.4 Reinstall bags, close and latch the hood before continuing mowing.

4.3 BAGGER REMOVAL FOR SIDE DISCHARGE:

4.3.1 Shut off the deck drive, stop engine and wait for all moving parts to stop. Remove key.

4.3.2 Remove the discharge tube by releasing the latch at the blower. Slide the tube off the blower outlet and remove the upper end from the hood.

4.3.3 Remove the Belt cover by loosening the knobs. For 60" units the outboard knob does not need to be removed completely to remove the belt cover.

⚠ CAUTION
POTENTIAL HAZARD ♦ The deck sheave will become very hot
WHAT CAN HAPPEN ♦ Touching a hot deck sheave can cause severe burns.
HOW TO AVOID THE HAZARD ♦ Allow the deck sheave to cool completely before removing the belt.

4.3.4 Pull the idler release handle and remove the belt from the upper groove of the deck sheave.

4.3.5 Unlatch the front end of the blower. Pivot the blower back and lift it off the deck.

4.3.6 Install the discharge chute using the chute pivot pin and hairpin (see figure 18).

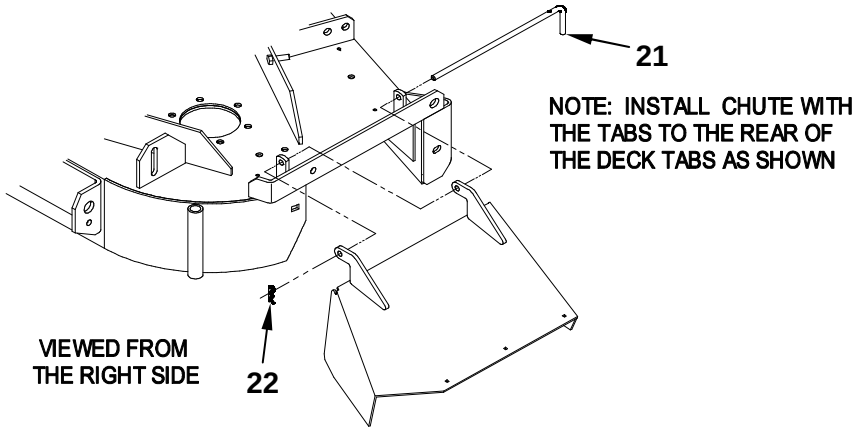


FIGURE 18
DISCHARGE CHUTE INSTALLATION

4.3.7 Re-install the plastic belt cover and tighten the knobs.

4.3.8 Remove the hair pins and clevis pins holding the hood assembly to the mount weldment.

4.3.9 Lift the bag and hood assembly off the mount.

4.3.10 The removable weights must be removed from above the caster wheels (and front of floor pan for units with a 2 post foldable ROPS). To remove the caster weights, loosen the clamping knobs until the weight can be moved relative to the caster arm. Remove the hairpins and clevis pins that hold the weights to the caster arms. Carefully lift the weights off of the caster arms.

For units with a 2 post foldable ROPS: To remove the front weight, remove the 2 hairpins that retain it and then lift the weight from the mount plates.

The weights and brackets bolted to the floor pan remain on the unit.

Note: The removable weights are heavy. Use care when lifting them. Make sure that you can hold them securely before lifting them. Use caution when positioning your hands so that you do not set them down on your hands or fingers.

Note: The portions of the Ultra Vac bagger that are not bolted to the mower are designed to be installed or removed in their entirety. Do not operate the mower with only a portion of the Ultra Vac installed.

⚠ CAUTION
POTENTIAL HAZARD ♦ Caster or front floor pan weights installed without bagger may cause Loss of Traction and Steering control.
WHAT CAN HAPPEN ♦ Loss of control can result in an accident, which may cause Death, Injury, or property damage.
HOW TO AVOID THE HAZARD ♦ Install caster or front floor pan weights ONLY when bagger is installed.

4.3.11 The machine can now be used for side discharge mowing.

4.4 TRANSPORTING

4.4.1 Transporting a Unit: Use a heavy-duty trailer or truck to transport the machine. Lock brake and block wheels. Securely fasten the machine to the trailer or truck with straps, chains, cable, or ropes. Be sure that the trailer or truck has all necessary lighting and marking as required by law. Secure a trailer with a safety chain.

⚠ CAUTION

POTENTIAL HAZARD

- This unit does not have proper turn signals, lights, reflective markings, or a slow moving vehicle emblem. These items are required to drive on a public street or roadway.

WHAT CAN HAPPEN

- Driving on a street or roadway without such equipment is dangerous and can lead to accidents causing personal injury.
- Driving on a street or roadway without such equipment may also be a violation of State laws and the operator may be subject to traffic tickets and/or fines.

HOW TO AVOID THE HAZARD

- Do not drive a unit on a public street or roadway.

⚠ WARNING

POTENTIAL HAZARD

- Loading a unit on a trailer or truck increases the possibility of backward tip-over.

WHAT CAN HAPPEN

- Backward tip-over of the unit could cause serious injury or death.

HOW TO AVOID THE HAZARD

- Use extreme caution when operating a unit on a ramp.
- Use only a single, full width ramp; DO NOT use individual ramps for each side of the unit.
- If individual ramps must be used, use enough ramps to create an unbroken ramp surface wider than the unit.
- DO NOT exceed a 15° angle between ramp and ground or between ramp and trailer or truck.
- Avoid sudden acceleration while driving unit up a ramp to avoid tipping backward.
- Avoid sudden deceleration while backing unit down a ramp to avoid tipping backward.

4.4.2 Loading a Unit: **Empty grass bags before attempting to load unit on trailer or truck.** Use extreme caution when loading units on trailers or trucks. One full width ramp that is wide enough to extend beyond the rear tires is required instead of individual ramps for each side of the unit. The lower rear section of the tractor frame extends back between the rear wheels and serves as a stop for tipping backward. Having a full width ramp provides a surface for the frame members to contact if the unit starts to tip backward. If it is not possible to use one full width ramp, use enough individual ramps to simulate a full width continuous ramp.

Ramp should be long enough so that the angles between the ramp and the ground and the ramp and the trailer or truck do not exceed 15°. A steeper angle may cause mower deck components to get caught as the unit moves from ramp to trailer or truck. Steeper angles may also cause the unit to tip backward. If loading on or near a slope, position the trailer or truck so it is on the down side of the slope and the ramp extends up the slope. This will minimize the ramp angle. The trailer or truck should be as level as possible.

DO NOT attempt to turn the unit while on the ramp, you may lose control and drive off the side.

Avoid sudden acceleration when driving up a ramp and sudden deceleration when backing down a ramp. Both maneuvers can cause the unit to tip backward.

5. MAINTENANCE:

⚠ WARNING
POTENTIAL HAZARD ♦ While maintenance or adjustments are being made, someone could start the engine.
WHAT CAN HAPPEN ♦ Accidental starting of the engine could seriously injure you or other bystanders.
HOW TO AVOID THE HAZARD ♦ Remove the key from the ignition switch and pull the wire(s) off the spark plug(s) before you do any maintenance. Also push the wire(s) aside so it does not accidentally contact the spark plug(s).

⚠ WARNING
POTENTIAL HAZARD ♦ The engine can become very hot.
WHAT CAN HAPPEN ♦ Touching a hot engine can cause severe burns.
HOW TO AVOID THE HAZARD ♦ Allow the engine to cool completely before service or making repairs around the engine area.

5.1 PERIODIC MAINTENANCE

IMPORTANT: Before conducting any maintenance, shut off deck drive, stop engine and wait for all moving parts to stop. Remove spark plug wire(s) or remove key.

5.1.1 Blower Housing/Impeller ***Service Interval: Daily.***

Inspect for wear or damage daily. Replace or repair worn parts as needed.

Note: When mowing in areas with sandy soil, use low lift blades on the cutting deck and higher cutting heights to minimize wear on the blower components.

5.1.2 Idler Bushings: ***Service Interval: 25 Hours.***
Lubricate with 1-2 pumps of SAE No. 2 multi-purpose grease.

5.1.3 Bags: ***Service Interval: Daily.***

Inspect the bags for wear, tears, or damage.

⚠ WARNING
POTENTIAL HAZARD ♦ Under normal use the bag will deteriorate and wear. Objects could exit a worn bag at high speeds.
WHAT CAN HAPPEN ♦ Thrown objects can cause serious injury or kill you or bystanders.
HOW TO AVOID THE HAZARD ♦ Check bag frequently for tears and holes. Replace worn bag.

5.1.4 Belts. ***Service Interval: 50 Hours.***

a) **For 52" units only -** Inspect the belt position on the idler arm.

The idler arm may become bent during use or transport. A bent idler arm could cause the belt to jump off of the idler and be damaged.

1) Make sure the belt cover is installed and run the blower for one to two minutes**.**
2) **Shut off the deck drive, stop engine and wait for all moving parts to stop. Remove key.** Remove the belt cover and check to make sure that the belt is riding near the center of the flat idler on the idler arm.
3) If the belt is not riding near the center of the idler, remove the blower, and bend the idler arm slightly.
4) Reinstall the blower and belt cover and repeat steps 1-3 until the belt is positioned near the center of the idler.

b) **All Units** - Inspect the belt for damage or wear. Replace belt with one of the following.

52" deck – PN 1-653438
60" deck – PN 103-0866
72" deck – PN 103-0867

5.1.5 Clean muffler and rear frame area: ***Service Interval: Daily***

⚠ WARNING
POTENTIAL HAZARD ♦ Operating engine parts, especially the muffler, become extremely hot.
WHAT CAN HAPPEN ♦ Severe burns can occur on contact. ♦ Debris, such as leaves, grass, brush, etc. can catch fire.
HOW TO AVOID THE HAZARD ♦ Allow engine parts, especially the muffler, to cool before touching. ♦ Remove accumulated debris from muffler and engine area. ♦ Install and maintain in working order a spark arrester before using equipment on forest-covered, grass-covered, brush-covered unimproved land.

6. Tips and Troubleshooting

Your Exmark Ultra Vac has been designed to be the most productive bagging system on the market. The following tips have been collected to help you get the most out of your Ultra Vac right from the start.

6.1 When mowing in areas with sandy soil, use low lift blades on the cutting deck and higher cutting heights to minimize wear on the blower components.

6.2 When mowing in wet conditions, such as just after a rain or in heavy dew, use low lift blades on the cutting deck to minimize plugging of the blower.

6.3 When the bags get full, the sound of the blower will change and there will be slight blowout from the front right corner of the deck. Emptying the bags at this point will minimize the potential for the tube to plug.

6.4 If there is excessive blowout from the deck, check to make sure that the rear screen in the hood is clear of grass build up. It is recommended that the screen and mesh portions of the bags be cleaned regularly to maintain proper air flow. This is especially important in wet conditions.

6.5 During dry conditions check engine air cleaners and clean cooling fins more frequently. The Ultra Vac has been designed to minimize the impact of dust and debris on the mower, but bagging can be a dirty environment.

6.6 During dry conditions, switching to a lower lift blade may reduce blowout without hurting quality of cut.

6.7 Maintaining a ground speed that does not pull down the engine RPM will allow for the highest productivity and best quality of cut. Bogging the engine RPM down by going too fast will cause plugging and quality of cut issues.

6.8 When storing the Ultra Vac, it is recommended that any build up in the blower be cleaned out. Dry grass build up may cause problems with the impeller when the unit is put back into operation.

6.9 If the blower drive belt snaps or breaks frequently, check the alignment of the idler arm per section 5. An arm that is bent out of position can cause the belt to jump off of the idler and be cut by the sheaves.

6.10 If the idler pulley contacts the deck sheave, check the alignment of the idler arm per section 5. Also check the mounting tube on the deck and the mounting pin on the blower for bending or excessive wear. This condition is more likely to occur with smaller deck sizes.

7. Limited Warranty
Exmark Turf Equipment

Conditions and Products Covered

Exmark Mfg. Co. Inc. and its affiliate, Exmark Warranty Company, pursuant to an agreement between them, jointly warrant on the terms and conditions herein, that we will repair, replace or adjust any part manufactured by Exmark and found by us (in the exercise of our reasonable discretion) to be defective in factory materials or workmanship.

This warranty applies to Exmark turf equipment sold in the US or Canada. This warranty may only be assigned or transferred to a second (or third) owner by an authorized Exmark dealer. The warranty period commences upon the date of the original retail purchase.

Products	Warranty Period
• All Products (except as noted below)	1 year (90 days for rental use)
• Peerless 5-speed transmission (extended beyond manufacturer's warranty of 90 days)	1 year
• Frame, Hydrostatic Traction System, Electric Clutch and Exmark supplied Mufflers	2 years
• Blade Spindle Assy and Deck Jackshaft Assy (1 year parts and labor, with additional 2 years parts only)	3 years
• Belts and Tires	90 days
• Battery	Refer to the battery manufacturer's warranty in the literature packet
• Engine*	Warranty is covered by engine manufacturer

*Please refer to the engine manufacturer's warranty statement that is included in the literature packet. We are not authorized to handle warranty adjustments on engines.

This warranty only includes the cost of parts and labor.

Items and Conditions Not Covered

This warranty does not cover the following:

- Pickup and delivery charges to and from any authorized Exmark Service Dealer.
- Any damage or deterioration due to normal use, wear and tear, or exposure.
- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, and adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Any repairs necessary due to use of parts, accessories or supplies, including gasoline, oil or lubricants, incompatible with the turf equipment or other than as recommended in the operator's manual or other operational instructions provided by Exmark.

All warranty work must be performed by an authorized Exmark Service Dealer using Exmark approved replacement parts.

Instructions for Obtaining Warranty Service

1. Contact any Exmark Service Dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at www.exmark.com. U.S. Customers may also call 402-223-6375.
2. Bring the product and your proof of purchase (sales receipt) to the Exmark Service Dealer.

If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, contact us at:

Exmark Customer Service Department
The Exmark Warranty Company
2101 Ashland Avenue
Beatrice, NE 68310
402-223-6375 or
service@exmark.com

Owner's Responsibilities

The Exmark turf equipment, including any defective part, must be returned to an authorized Exmark service dealer within the warranty period. This warranty extends only to turf equipment operated under normal conditions. You must properly service and maintain your Exmark product as described in the operator's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

As a condition to this warranty, customer shall have read the operator's manual and shall have completed and submitted to Exmark Warranty Company, within the prescribed time, the Exmark warranty registration.

General Conditions

The sole liability of Exmark and Exmark Warranty Company with respect to this warranty shall be repair and replacement as set forth herein. **Neither Exmark nor Exmark Warranty Company shall have any liability for any other cost, loss or damage, including but not limited to, any incidental or consequential loss or damage.**

In particular, we shall have no liability or responsibility for:

- Expenses related to gasoline, oil or lubricants.
- Travel time, overtime, after hours time or other extraordinary repair charges or charge relating to repairs or replacements outside of normal business hours at the place of business of the authorized Exmark service dealer.
- Rental of like or similar replacement equipment during the period of any warranty, repair or replacement work.
- Any telephone or telegram charges or travel charges.
- Loss or damage to person or property other than that covered by the terms of this warranty.
- Any claims for lost revenue, lost profit or additional cost as a result of a claim of breach of warranty.
- Attorney's fees.

No Claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Exmark mower.

There are no understandings, agreements, representations, or warranties, express or implied, including but not limited to any regarding the merchantability (that product is fit for ordinary use) or fitness for use (that product is fit for a particular purpose), not specified herein, respecting the equipment which is the subject of this warranty.

Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SERVICE RECORD

Date	Description of Work Done	Service Done By

SEE EXMARK'S COMPLETE LINE OF PRODUCTS FOR TURF CARE

LAZER Z®

LAZER Z® HP

LAZER Z® XP

LAZER Z® CT

TURF RANGER®

VIKING HYDRO

TURF TRACER®

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METRO® HP

ULTRA VAC™

ULTRA VAC™ QDS

GRASS CATCHER

SELF STEERING SULKY

MICRO-MULCH™ ACCESSORY

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